INDEX OF SURGICAL PROGRESS.

GENERAL SURGERY.

I. **The Role Played by the Tissues in Acute Inflammations and the Changes Observed in the Cells of the Connective Tissue.** By Dr. KARG. The changes in the fixed connective tissue cells (karyo-kenesis) are closely observed. The endothelial cells of the præpatellar bursa in the human subject were chosen for this purpose. The bursa was extirpated while in active inflammation hardened and studied. Karyo-kenesis was observed in spots where purulent inflammation was not advanced. On the inner surface of the bursa several layers of large cells, spindle or round shaped, with large quantity of cell protoplasm, nuclei pale, large and oval with nucleoli and an intra-nuclear network (epithelioid cells). A few leucocytes were also observed. In the nuclei of the epithelioid cells the chromatin arranged itself into star-shaped figures, the cell membrane had disappeared and the nucleus was surrounded by a transparent zone. In other places distinct divisions into daughter stars was seen (karyo-kenesis). In certain spots where *macroscopically* small yellow accumulations of streptococci indicated an active bacterial invasion, (purulent inflammation) under the microscope no karyokenesis was seen, In certain early stages of inflammation therefore, there is a proliferation of the cells of the connective tissue, concomitant with the diapedesis of blood cells with the changes in the wall and lumen of the blood vessels. The epithelioid cells result from the fixed connective tissue cells. The above changes can be observed in the endothelium of blood vessels. Thiersch, Waldeyer, Ranvier attribute the organization of thrombi to their epithelioid cells. In one form of inflammation (reparative, non-specific) the inciting agent, or trauma or chemical influence, ceases to act after the first moment. Here a scanty migration of leucocytes results and the karyokenetic changes in the connective tissue cells mark the proliferation of the same and the consequent repair results. In the other form of inflammation (infectious specific) the bacterial element acts as a constant irritant, processes leading to an abundant migration of leucocytes prevail, karyokenetic changes cease and destructive processes are inaugurated.—*Deutsche Zeit. f. Chirg.*, Bd. xxv, hft. iv and v.

II. Micro-Organisms in the Air of Hospital Wards. By Dr. Von Eiselberg (Billroth's Clinic). Investigations directed to the detection of the streptococcus playing the etiological role in cases of erysipelas (streptococcus, erysipel., Rosenbach). The first efforts were directed to the air of the general wards and discovered in cultures prepared from exposed gelatine and agar plates, in addition to many unimportant mould fungi, the staphylococcus pyog. aureus (Rosenbach).

A second series of experiments were made in a surgical ward where there had been four cases of erysipelas.

Plates prepared in the manner below described had given cultures of a streptococcus identical in appearance and behavior to that described by Fehleisen (streptococcus erysipelatosus).

A third series of exposures of gelatine plates were made in an isolation ward where there were patients suffering from erysipelas. Here the plates were exposed in immediate vicinity of the patient on the bedding. The author in these cases also thinks he has discovered the streptococcus erysipelatosus. Lastly cultures were made of desquamating epidermal scales of erysipelatous regions of the body and the above streptococcus found. In healthy individuals epidermal scales did not give the same results. The methods employed by the author were of the most simple and primitive nature (from a bacterial standpoint). Plates of sterilized gelatine were simply exposed to the air of the above localities for a certain length of time then put under bell jars and allowed to remain a certain time until development of colonies. The painstaking methods of Hesse or the method of Emmerich (bouillon) were not tried. Dr. Eiselberg then made cultures from the above plates in gelatine and agar tubes, and in a series of experiments he inoculated rabbits in order to observe the effects of the culture obtained.